



An Analysis of the Economic Aspect of Technical Education and Training

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Abstract

This study was accompanied with objectives to analyze the usefulness of technical training imparted in technical courses. A sample size 214 respondents were randomly selected out of total 478 trainees in different training centers. The data was analyzed through SPSS (20) by the application of Chi-Square test statistics and simple univariate analysis. The study concluded that effectiveness of technical training had highly significant association with enhancement in economic growth, training made use resources properly, cognitive learnings helped earning more and technical training as a way towards rapid earning. This study concentrated on economic aspect of technical training in the study area where this study affirmed that technically trained persons had more opportunities of finding employment in the job market. Technical training is the source of better income especially for those who have no or less chances of higher general education. This study also indicated the importance of cognitive oriented learning in terms of better economic earning.

Introduction

Technical training is a form of education deals with technology related knowledge. King et al. (2007) stated about the forms of technical trainings that it is of three forms i.e. those of public school based, civic and industrial, informal training. ILO (International Labor Organization, 2002) suggested skill training as supportive factors for economic development. According to them, yet in unindustrialized

developing countries, a very high number of citizens rely on informal economy; hence an initiative of technical skills development of such citizens would increase their chances of development.

Knowledge of technology is an indispensable feature headed for economic steadiness. OECD (1996) found that the economies of the nations under OECD are reliant on the

invention and practice of knowledge as they were never before. Moreover, Productivity and employment opportunities have high ratio in such industries that involve technology. A study in the 1980s, renowned an inclination towards a divergence in labor markets. In the United States, there was decline in wages for less skillful labors whereas the general joblessness frequency persisted low. The United Kingdom has a parallel remuneration gap amid the aforesaid labors (Alam, 2008). The reasons behind these outcomes were the policies of market and government guidelines which resulted technological changes and increased market demand for skilled labor force (OECD, 1994). According to Gibbons et al. (1994) there is no difference amid science and technology in knowledge based economies. Moreover, a study revealed that the economic outcomes were higher for the firms which introduced technological use. It can be concluded that the definition of technology in the firms will raise the demand for technical training and so as for trained workers (Krueger, 1993). A report indicated that in the previous period the human capital has been the center of rapid growth in manufacture, but there were no symbols from which it could be derived that this has condensed the degree of return to investment in education and training (Abramowitz, 1989). Human capital thought to be more effective and produce more, investment in skill training and education in vital.

Bennell (1996) viewed education in all sectors as necessary for the developing countries as a way of growing national development. It is education and training that strengthen the productivity level of the workers and provided the opportunities of solid life time earnings (Fagerlind & Saha, 1989). Technical education

and skills can be effective for the workers if it is utilized properly (Foster, 1965). A study suggested that every worker should be trained before starting a work for healthier productivity (Jeong, 1999). Human Capital theory totally indicated the benefits of skill training for both individual and society. Education not only reimburses those who achieve it through augmented income, but on the other hand correspondingly assistances complete social development (Alam, 2008). In agriculture sector, training for the farmers can double their productivity and so as their income (Nikiko, 2001).

In the synthesis of review, it can be concluded that technical skill development forms a good working and earning proportion of the country. Therefore creativity in this sector is vital especially for a country like Pakistan

Methodology

The study was descriptive in nature which aimed to explore the effectiveness of technical education. The study was done in district Lower Dir, Khyber Pakhtunkhwa, Pakistan. The data was collected from sample population of a union council namely Lal Qila Maidan. The study was done while determining the association between the two variables given in the following table.

Table 1. Variables of the Study

Independent Variable	Dependent Variable
Economic Aspect of Technical Training	Effectiveness of Technical Training

2.1 Sampling and sampling design

A sample size of 214 respondents stands for 478 trainees in an analogy table of Sekeran (2003). There were many institutes in the selected union council Lal Qila, Lower Dir, therefore, sample size for each institution was carried out by the application of proportional allocation formula (Cochran, 1977).

$$n_i = \frac{n}{N_i} \times N_i$$

n = Required Sample size.

N = Total possible respondents in the study area.

N_i = Possible respondents in each institute.

n_i = Selected respondents from each institution.

2.2 Tools for data collection

Interview schedule was used for data collection purpose keeping in mind to clarify any shortages in the field.

2.3 Analysis of data

Chi-square test statistics were used to measure the association between dependent and independent variables. For this purpose, Statistical Package for Social Sciences (SPSS-20) was used. Association was carried out by using the following formula.

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^c \frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

Result and Discussion

3.1 Effectiveness of training

To measure the association between effective technical training and economic aspect, a few statements were developed and asked from the

respondents in the field which are given in table 1.

Data showed that a high number of trainees as 90.2% declared that their productivity was increased after a technical training course, while 6.5% respondents did not found any change in their performance and 3.3% were uncertain. Technical training provide working skills in a specific occupational ladder which made the trainees more productive and effective. Results were in support of Mustafa et al. (2005) who also noted improved productivity for technically trained workers after the training.

Similarly, 91.1% respondents saw the chances of employability for themselves after the completion of the course, while 8.4% respondents negated the statement and a respondent 0.5% remained uncertain. These results confirmed Malamud and Eleches (2010) that technically trained workers have high chances of jobs in the market.

A majority of i.e. 79.9% respondents agreed that their training contents were accorded to the demand of the market, while a proportion of 14.0% respondents were unsatisfied and 6.1% respondents were uncertain. Results disclosed effectiveness of training because there was no miss match between training contents and market demand.

Moreover, a majority of 71% respondents believed that technical education is more valuable than general education, while 23.8% had a positive attitude towards the general courses and 5.1% of the respondents stayed uncertain. These statistics reflects with the findings of a study that majority of people with holding higher degrees are employee

compared with those with only a secondary school diploma (OECD, 2014).

A high proportion of 72% respondents agreed that the cost of technical education is lower than its returns, while, 19.6% considered the cost as higher than the outcomes. Results indicated that technical training is best option especially for those who live in a less developed community and below the poverty line, because this study disclosed that the expenses of technical education and training is lower than its returns for trained person.

Furthermore, a high proportion of the respondents 90.7% agreed that excellence and amount of training are vital in terms of effects of performance while, 7.5% respondents disagreed. It designated the significance of both level and nature of a course. OECD (2007) also mentioned these things as significant for positive outcome of technical education

Additionally, a proportion of 68.2% respondents agreed that effective training course decreases the gap between workers and market, while 25.2% respondents disagreed and 6.5% remained uncertain. These results are matching some earlier findings that if the contents of the course are accorded to the market need then for sure such training would reduce the miss match. Responsiveness is necessary for a qualification in order to be effective. It must respond to the needs of both employee and employer (Department for Business Innovation and Skills, 2014).

Moreover, 70.1% of the respondents agreed that their learnt skills have a role in their daily lives, while, 27.6% of them noticed no effect of training on their lives and a proportion of 2.3% persons had no idea. Results were in line

to the findings of a study done by OECD (2007) that for all courses, cognitive growth of the students must be the main objective.

Congruently, 76.6% of the respondents thought that their effectiveness were improved by the level of training they got, while 18.7% disagreed and 4.7% of the respondents endured uninformed. It indicated that quality technical training ensures effectiveness by decreasing miss match because every firm and employer give preference to a skilful person than an unskilled. This is not only the market which raises the need of skill attainment but the personal interest of the public because they want to have competitive skills.

Likewise, 81.8% respondents agreed that training is necessary for competitiveness in the market while, 13.1% negated and 5.1% respondents were uncertain about the statement. Fallouts of the study revealed that technical education is mandatory for the improvement in competency which would be considered effectiveness

Table No. 2 Perception of the sample respondents about the effectiveness of training

Statements	Yes	No	Uncertain
Enlargement in output after technical training course.	193 (90.2%)	14 (6.5%)	7 (3.3%)
Employability is greater than before due to technical training.	195 (91.1%)	18 (8.4%)	1 (0.5%)
Course materials were meeting market needs.	171 (79.9%)	30 (14.0%)	13 (6.1%)
Practical skills are more beneficial than those of general education based skills.	152 (71.0%)	51 (23.8%)	11 (5.1%)
Profits for technical training course are more than the expenditures over it.	154 (72.0%)	42 (19.6%)	18 (8.4%)
Both Level and nature of training are noteworthy.	194 (90.7)	16 (7.5%)	4 (1.9%)
Insufficiency of skills can be reduced by technical training.	146 (68.2%)	54 (25.2%)	14 (6.5%)
The skills adopted in technical course helped in daily life.	150 (70.1%)	59 (27.6%)	5 (2.3%)
Competitiveness can be improved by a good quality training course.	164 (76.6%)	40 (18.7%)	10 (4.7%)
A competent person must be well trained.	175 (81.8%)	28 (13.1%)	11 (5.1%)

*value in the table present occurrence whereas values in the interpolation signify ratios proportion of the respondents

3.2 Association between economic aspect of the training and Effectiveness of training

Economic factor is seemed to be strongly associated with whether a person is educating him/herself in general education of he/she is getting a technical course. Everyone educate their children in the sector where they foresee more economic earning opportunities. In this part of the study, we applied bivariate analysis to determine the association between technical training and its economic aspect.

As given in table 2, a non-significant

($p=0.253$) association was noted between usefulness of training and trained labours flourishing effect on national economy. It can be derived from the findings that for a booming national economy, highly educated human resource is necessary but for day to day familial needs technical training can be helpful and effective.

Similarly, a non-significant association ($p=0.925$) was found amid usefulness of training and eligibility of the trainee in terms of earning abroad. Probability of this association can be the opportunities of own

business for the trainees who received a good quality technical training.

However, a highly significant ($p=0.000$) association was noted between effective technical training and raise in economic growth. These findings are in line with organization of economic cooperation and development (1996) that technical education is an obligatory feature leading towards economic stability.

Contrariwise, a non-significant connexion ($p=0.594$) was perceived between the use of training and its role in quality labor establishment. It can be derived from the findings that in modern world, excellent and quality human resource creation is possible through greater knowledge and higher education. Though technical education forms good working skills to the workers but the role of scientific and general education is vital.

Moreover, a highly significant association ($p=0.000$) was seen amid efficacy of training and appropriate use of means. Probably, the use of means is related to personal ability of the person who has those resources. Therefore, a skillful person can better manage the accessible capitals in the time of need.

In addition, a non-significant connection ($p=0.617$) was observed concerning the efficiency of training and accessibility to fundamental needs.

However, a highly noteworthy association ($p=0.000$) was perceived amid the useful training and that more earning opportunities over intellectual learning's. The findings matched Fagerlind and Saha (1989) who found education and training as essential tools

for higher productivity and life time earnings.

Even so, there was a highly significant association ($p=0.000$) amid the efficacy of training and training as a mean of rapid income. This connotation is perhaps for the reason that technical training involves a lesser time period and then the trainee become able to use the learned skills in the market. Findings are in line to of Mane (1999) that technical education and training has more rapid and positive outcomes for the trainee than those of general education centered skills.

Table No. 3 Association between economic aspect and effectiveness of training

Statements	Attitude	Effectiveness of Training		Total	Chi square (χ^2) P value
		Yes	No		
Trained human capital flourishes national economy.	Yes	165 (77.1%)	13 (6.1%)	178 (83.2%)	$\chi^2= 2.751$ (P= 0.253)
	No	31 (14.5%)	1 (0.5%)	32 (15.0%)	
	Uncertain	3 (1.4%)	1 (0.5%)	4 (1.9%)	
Technical Training enables to earn outside the country.	Yes	159 (74.3%)	12 (5.6%)	171 (79.9%)	$\chi^2= 0.157$ (P= 0.925)
	No	38 (17.8%)	3 (1.4%)	41 (19.2%)	
	Uncertain	2 (0.9%)	000	2 (0.9%)	
Technical training enhanced economic growth.	Yes	159 (74.3%)	12 (5.6%)	171 (79.9%)	$\chi^2=16.025$ (P= 0.000)
	No	29 (13.6%)	1 (0.5%)	30 (14.0%)	
	Uncertain	11 (5.1%)	2 (0.9%)	13 (6.1%)	
Technical trainings help in formation of quality human capital.	Yes	165 (77.1%)	11 (5.1%)	176 (82.2%)	$\chi^2=1.042$ (P= 0.594)
	No	20 (9.3%)	2 (0.9%)	22 (10.3%)	
	Uncertain	14 (6.5%)	2 (0.9%)	16 (7.5%)	
Technical Training make able to use resources properly.	Yes	159 (74.3%)	11 (5.1%)	170 (79.4%)	$\chi^2= 22.012$ (P= 0.000)
	No	32 (15.0%)	2 (0.9%)	34 (15.9%)	
	Uncertain	8 (3.7%)	2 (0.9%)	10 (4.7%)	
Technical Trainings enable to have access to basic needs.	Yes	152 (71.0%)	11 (5.1%)	163 (76.2%)	$\chi^2= 0.967$ (P= 0.617)
	No	39 (18.2%)	4 (1.9%)	43 (20.1%)	
	Uncertain	8 (3.7%)	000	8 (3.7%)	
Cognitive oriented training help to earn more.	Yes	163 (76.2%)	12 (5.6%)	175 (81.8%)	$\chi^2= 41.422$ (P= 0.000)
	No	27 (12.6%)	1 (0.5%)	28 (13.1%)	
	Uncertain	9 (4.2%)	2 (0.9%)	11 (5.1%)	
Technical training as a way to quick earning.	Yes	171 (79.9%)	4 (1.9%)	175 (81.8%)	$\chi^2= 51.033$ (P= 0.000)
	No	25 (11.7%)	6 (2.8%)	31 (14.5%)	
	Uncertain	3 (1.4%)	5 (2.3%)	8 (3.7%)	

*Digit in table signify occurrences and digit in afterthought (parenthesis) signify percentage share of respondents and in the last columns number in the parenthesis characterize P-Value

Conclusion

This study concentrated to conclude the remarks regarding the efficacy of technical

training by the analysis of its economic aspect where this study concluded that useful technical training provided jobs for the trained persons in the market. Technical training is the source of better income especially for those who have no or less chances of higher general education. This study also indicated the importance of cognitive oriented learning in terms of better economic earning

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